

Application No. 10/714,060  
Amd. Dated: July 2, 2007  
Reply to Office Action mailed April 3, 2007

**Amendment to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-7. (Cancelled)

8. (Presently Amended) A catheterization method for generating an arteriovenous fistula on demand between an a closely associated artery and a vein at a chosen anatomic site in-vivo, said catheterization method comprising the steps of:

(a) providing a first catheter that is positionable in the vein and a second catheter that is positionable in the artery, said first and second catheters having magnetic members thereon and at least one of said first and second catheters having a perforation member useable to perforate the artery and vein at adjacent locations to thereby create a fistula between the artery and vein;

(b) positioning the first catheter within the vein;

(c) positioning the second catheter within the artery;

(d) causing a magnetic attraction between the magnetic members; and

(e) using a perforation member located on at least one of said first and second catheters to perforate the artery and vein at adjacent locations to thereby create a fistula between the artery and vein

~~procuring a first catheter suitable for percutaneous introduction into and extension through a the vein in vivo to a chosen anatomic site, said first catheter being comprised of~~

~~(a) — a first tube having a a fixed axial length, a discrete proximal end, a discrete distal end, and at least one internal lumen of predetermined volume;~~

Application No. 10/714,060  
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~~(b) — a distal end tip adapted for intravascular guidance of said first tube through a vein in vivo to a chosen anatomic site;~~

~~(e) — first magnet means positioned at said discrete distal end and set in axial alignment with said distal end tip of said first tube, said first magnet means having sufficient magnetic force to cause an intravascular adjustment in position for said first catheter when in proximity with a source of magnetic attraction in vivo, and~~

~~(d) — a first component of vascular wall perforation means positioned at said discrete distal end adjacent to said first magnet means and set in axial alignment with said distal end tip of said first tube, said first component of vascular wall perforation means becoming intravascularly adjusted in position via the magnetic force of said first magnetic means of said first catheter in vivo;~~

~~(e) — means for activating said first component of vascular wall perforation means of said first catheter on demand wherein said vascular wall perforation means perforates a chosen anatomic site to generate a fistula in vivo;~~

~~percutaneously introducing said first catheter into a vein and extending said first catheter intravascularly to a chosen anatomic site adjacent to a closely associated artery;~~

~~procuring a second catheter suitable for percutaneous introduction into and extension through an artery in vivo to a chosen anatomic site, said second catheter being comprised of~~

~~(a) — a second tube having a fixed axial length, a discrete proximal end, a discrete distal end, and at least one internal lumen of predetermined volume;~~

~~(b) — a distal end tip adapted for intravascular guidance of said second tube through an artery in vivo to a chosen anatomic site;~~

~~(e) — second magnet means positioned at said discrete distal end and set in axial alignment with said distal end tip of said second tube, said second magnet means having sufficient magnetic force to cause an intravascular adjustment in position for said second catheter when in proximity with said first magnetic means of said first catheter in vivo;~~

~~(d) — a second component of vascular wall abutment means positioned at said discrete distal end adjacent to said second magnet means and set in axial alignment with said distal end tip of said second tube, said second component of vascular wall perforation means~~

Application No. 10/714,060  
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~~becoming intravascularly adjusted in position via the magnetic force of said second magnet means of said second catheter in vivo;~~

~~percutaneously introducing said second catheter into an artery and extending said second catheter intravascularly to a chosen anatomic site in proximity to said first catheter in to a closely associated vein;~~

~~permitting a transvascular magnetic attraction to occur between said first magnetic means of said extended first catheter in the vein and said second magnetic means of said extended second catheter in the closely associated artery whereby said first component of vascular wall perforation means of said first catheter lying within the vein comes into Transvascular alignment with said second component of vascular wall abutment means of said second catheter lying within the artery; and then~~

~~activating said first component of vascular wall perforation means of said first catheter on demand wherein said vascular wall perforation means perforate the vascular walls of said vein and closely associated artery concurrently at the chosen anatomic site to generate an arteriovenous fistula in vivo.~~

9. (New) A method according to claim 8 wherein ultrasound imaging is used to facilitate positioning of at least one of the catheters.

10. (New) A method according to claim 8 wherein intravascular ultrasound imaging is used to facilitate positioning of at least one of the catheters.

11. (New) A method according to claim 8 wherein fluoroscopy is used to facilitate positioning of at least one of the catheters.

12. (New) A method according to claim 8 wherein fluoroscopy with contrast medium is used to facilitate positioning of at least one of the catheters.

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13. (New) A method according to claim 8 wherein the first and second catheters have radiopaque markers thereon and wherein said radiopaque markers are used to facilitate positioning of the catheters relative to one another.
14. (New) A method according to claim 8 wherein the magnet members on the catheters provided in Step a comprise rare earth magnets.
15. (New) A method according to claim 8 wherein the magnetic attraction between the magnetic members results in adjustment of the positions of the catheters relative to one another.
16. (New) A method according to claim 8 wherein the magnetic attraction between the magnetic members draws the artery and vein closer to each other.
17. (New) A method according to claim 8 wherein the perforation member on at least one of the first and second catheters provided in Step a comprises a radiofrequency electrode.
18. (New) A method according to claim 17 wherein Step e comprises actuating the radiofrequency electrode.
19. (New) A method according to claim 18 wherein the electrode comprises a sliding electrode and wherein Step e further comprises slide the electrode to create slit perforations in the walls of the artery and vein.
20. (New) A method according to claim 8 further comprising the step of introducing boluses of carbon dioxide into the artery and vein adjacent to the location where the fistula is formed.